



*Seaford Manor, Long Island, N. Y.,  
Richard Heidelberg, Architect.*

IT COSTS  
*Less* TO LIVE  
*in a* **FIRESAFE**  
**CONCRETE HOUSE**



## Today's Trend Is Toward Firesafe Home Construction

THE year 1935 witnessed a revival in home construction which was characterized by wide acceptance of new and more practical architectural styles, and a sweeping turn to firesafe construction.

Firesafe construction, ideally exemplified by concrete masonry and reinforced concrete, has become a dominant factor in home building not only because of the protection it offers against fire hazards and losses, but because it represents the most economical form of construction. It is recognized that the accumulation of costs necessary to repair, replace and maintain houses that run down and depreciate under the ravages of time, use and weather, are largely eliminated in strong, durable, firesafe construction.

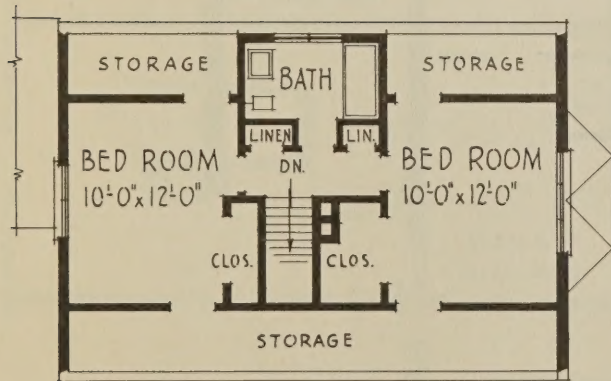
The following pages picture some of the new firesafe concrete houses built in 1935, and their new, practical floor plans and arrangements. Also are included typical details of walls, floors and roofs of both concrete masonry and reinforced concrete houses, and a brief statement of the reasons why it costs LESS to live in a Firesafe Concrete House.



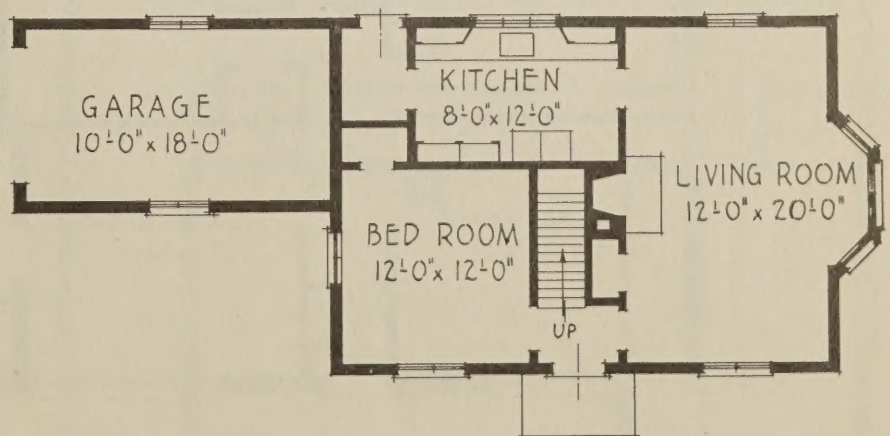


*Tappan, New York*

*Woman's Home Companion Design  
Frank Harper Bissell, Architect*

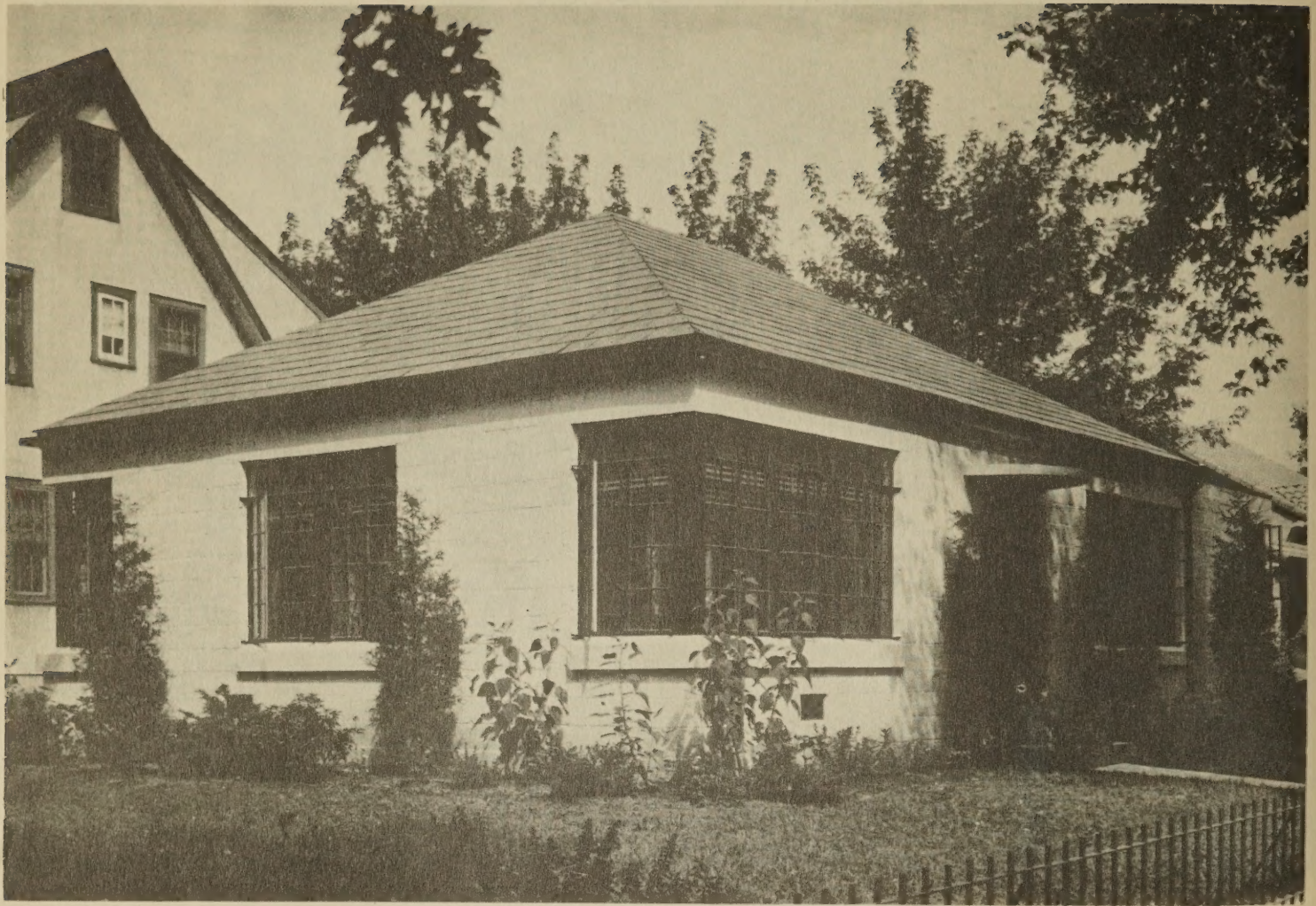


SECOND FLOOR PLAN



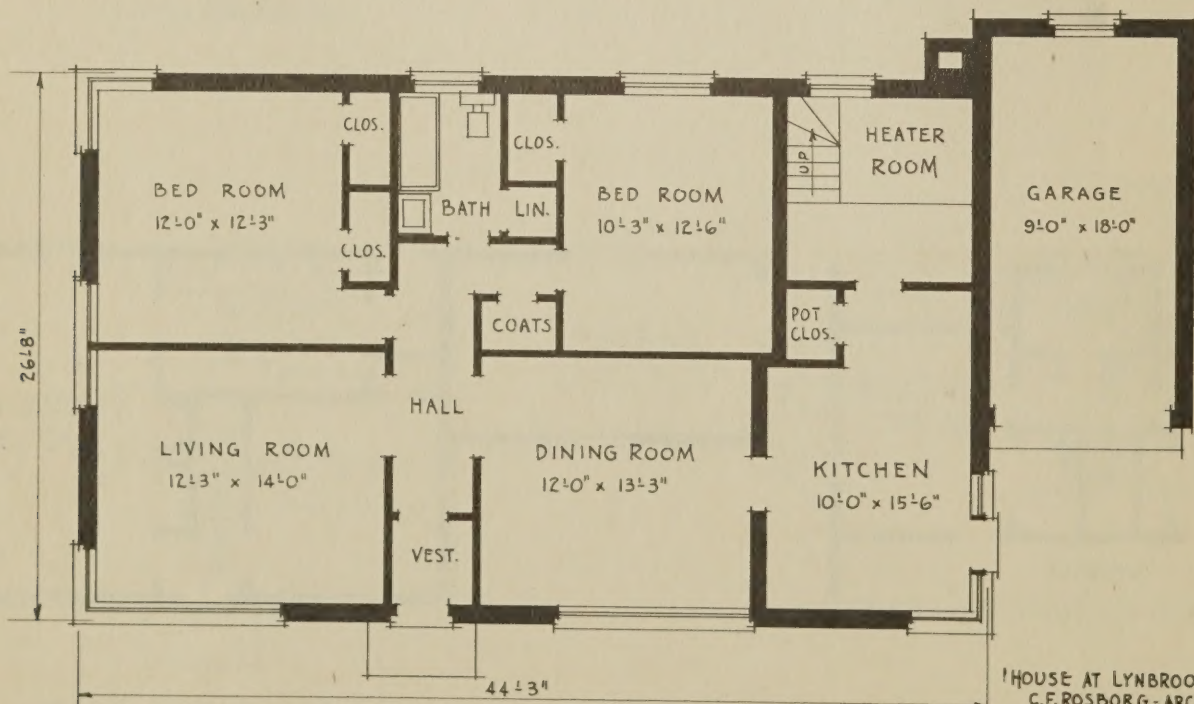
FIRST FLOOR PLAN





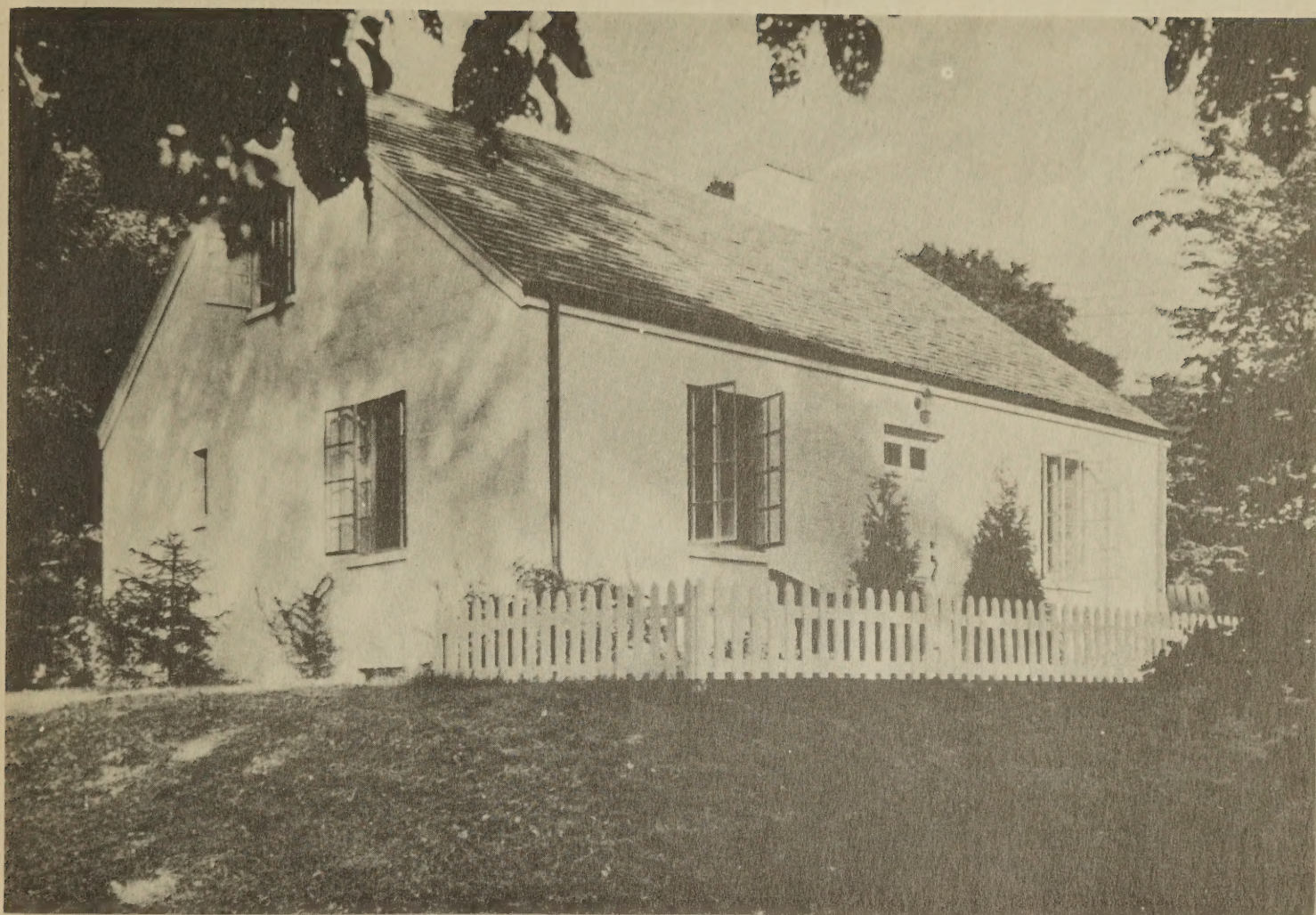
*Lynbrook, Long Island, New York*

*C. F. Rosberg, Architect*



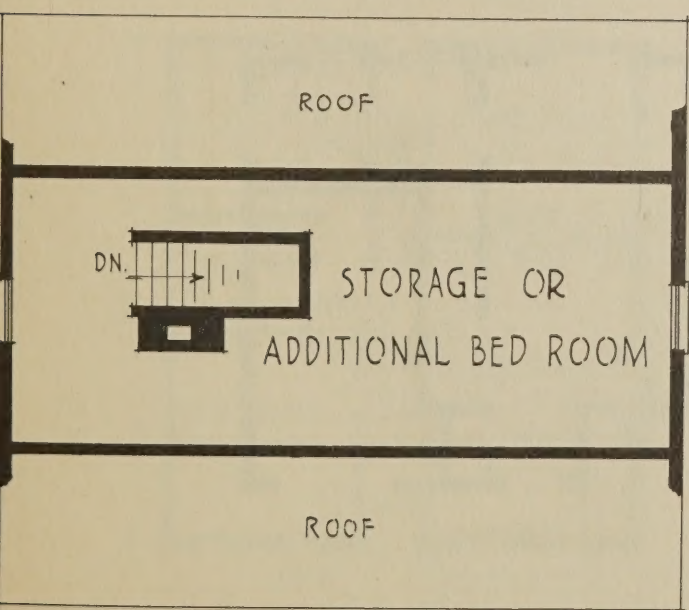
HOUSE AT LYNBROOK, L.I.  
C. F. ROSBERG - ARCHITECT  
365 LEXINGTON AVE. N.Y.C.



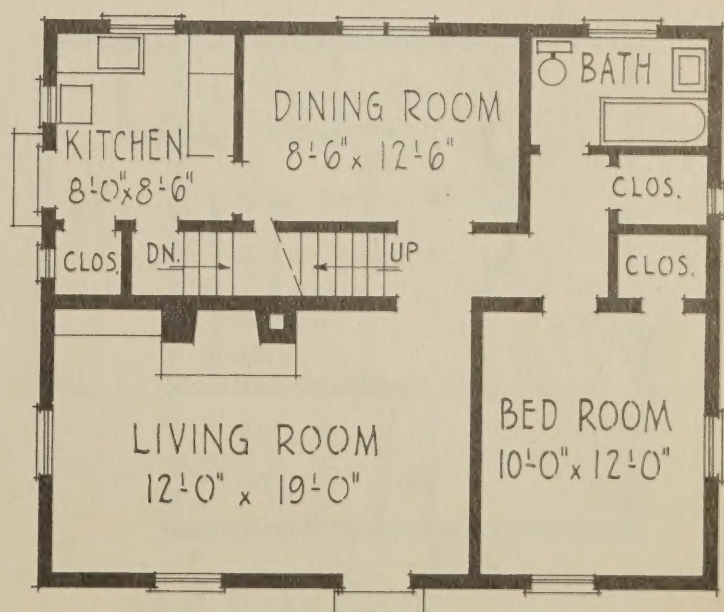


Bedford Hills, New York

C. Everett Burbank, Designer

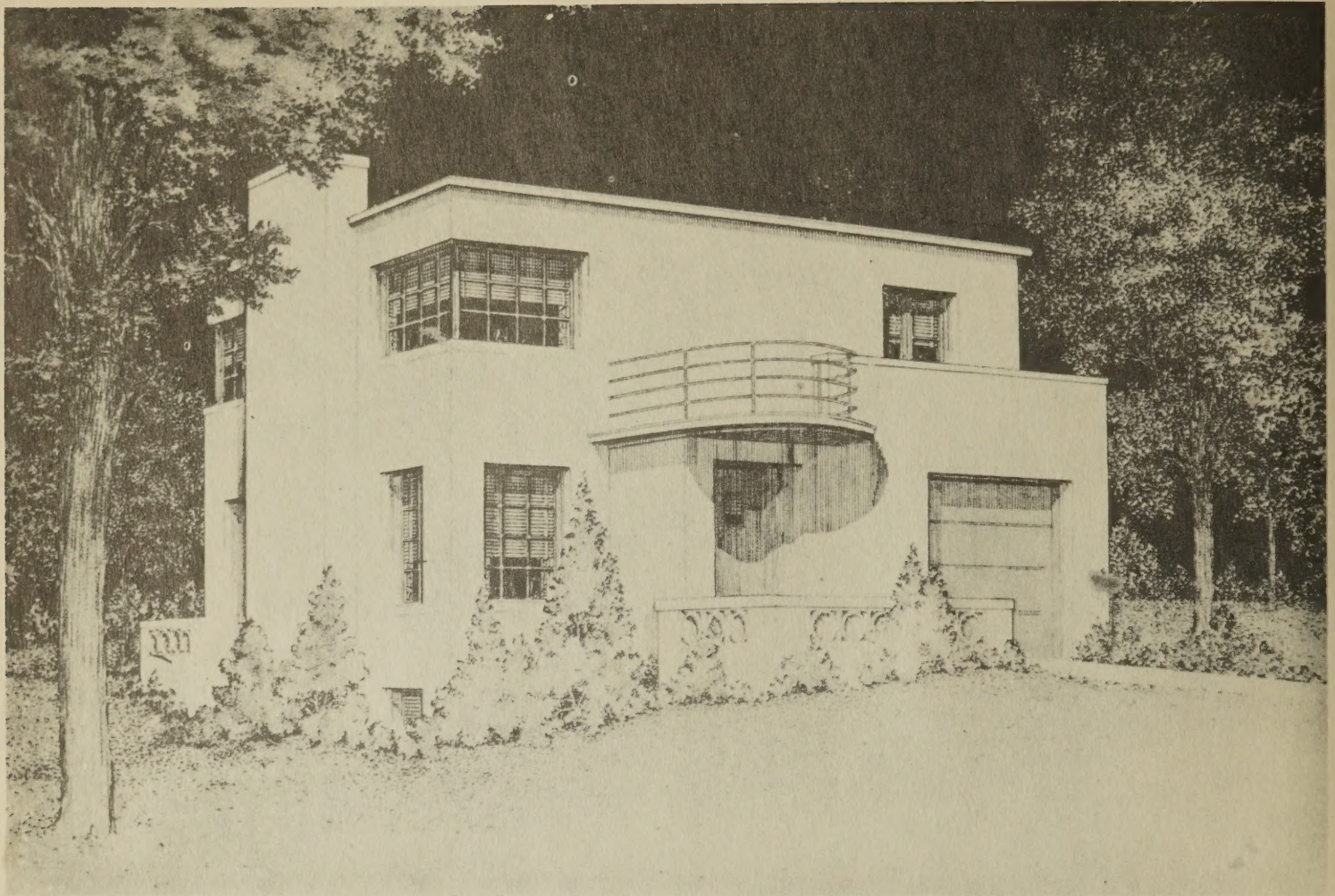


SECOND FLOOR PLAN



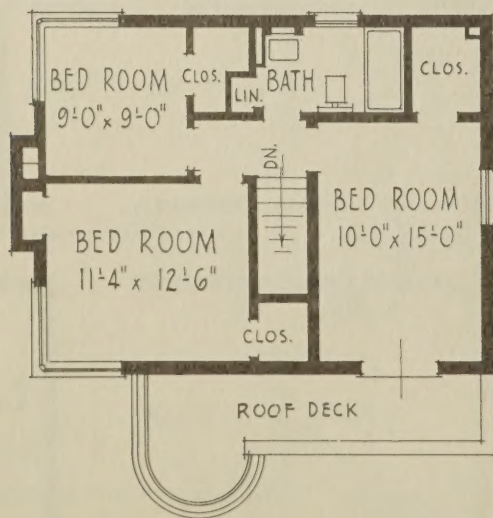
FIRST FLOOR PLAN



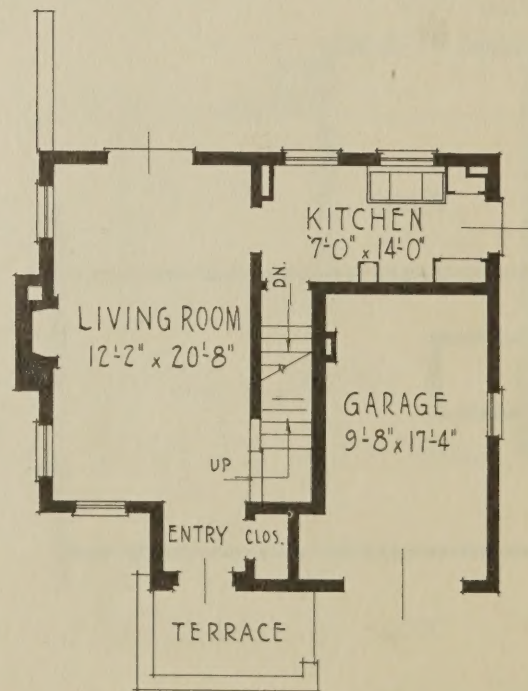


*La Fayette, Indiana*

*Burnham Bros. & Hammond, Architects*



SECOND FLOOR PLAN



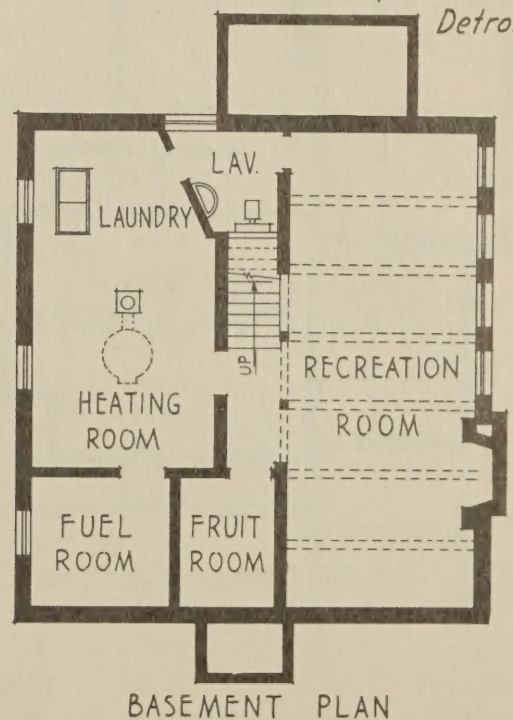
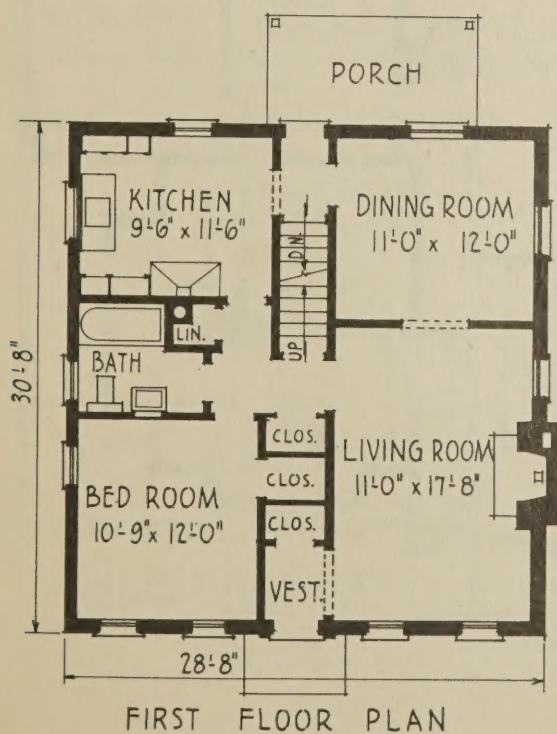
FIRST FLOOR PLAN





Detroit, Michigan

Albert E. Bill, Designer  
Fenkell & Outer Drive  
Detroit

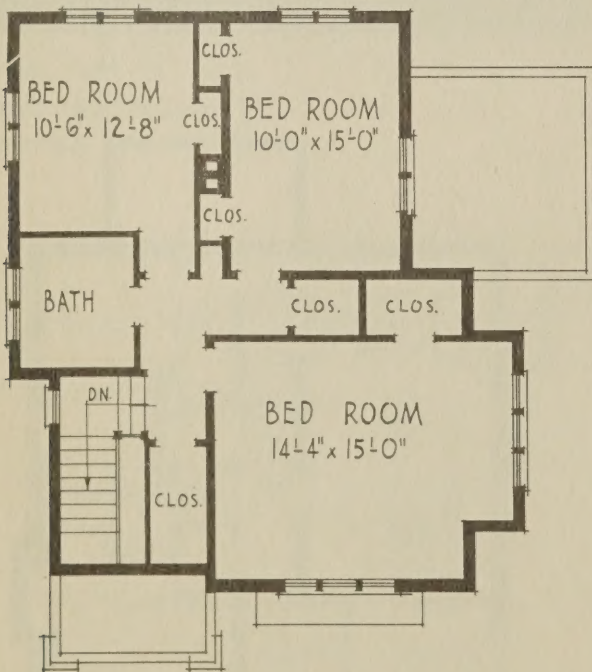




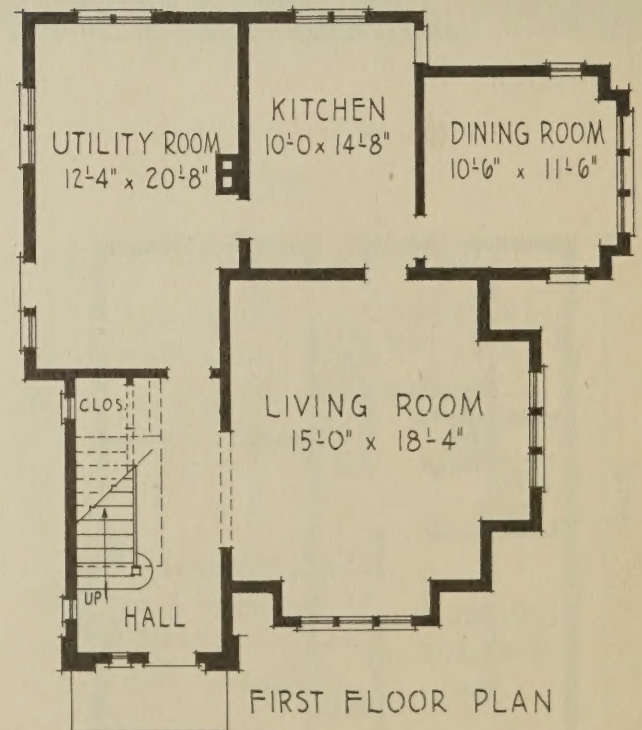


*Menasha, Wisconsin*

*Robert E. Schwartz, Designer*



SECOND FLOOR PLAN



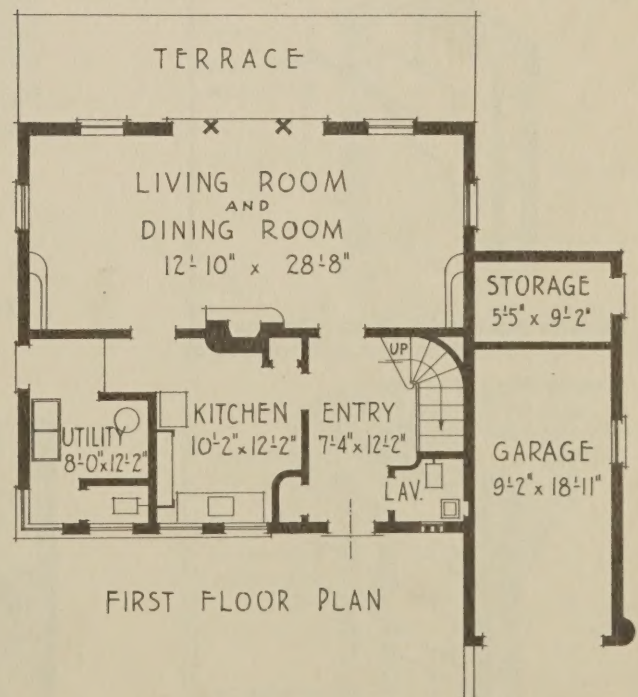
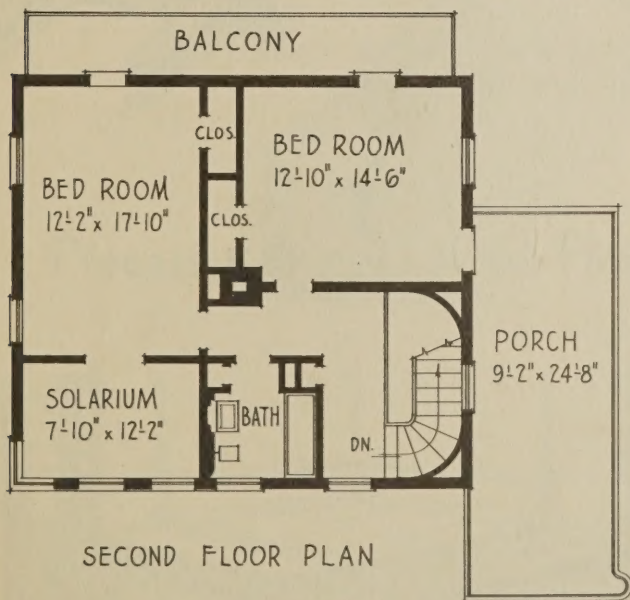
FIRST FLOOR PLAN





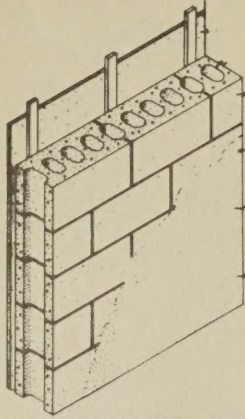
New Orleans, Louisiana

Weiss, Dreyfous & Seiferth, Architects

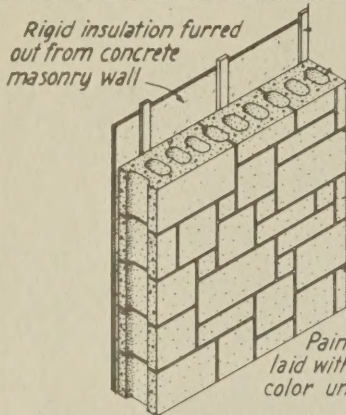




## Concrete Masonry Wall Sections



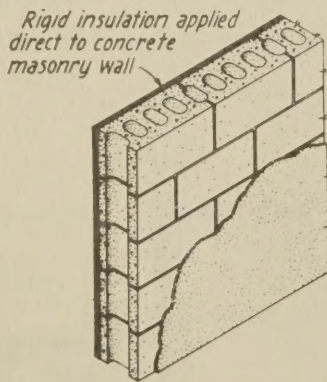
ORDINARY BOND WITH P.C. PAINT EXTERIOR



*Rigid insulation furred out from concrete masonry wall*

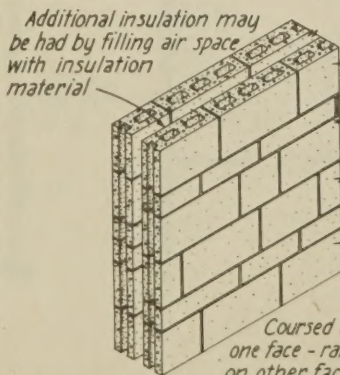
*Painted or laid with varied color units*

RANDOM ASHLAR PATTERN



*Rigid insulation applied direct to concrete masonry wall*

ORDINARY BOND WITH P.C. STUCCO EXTERIOR

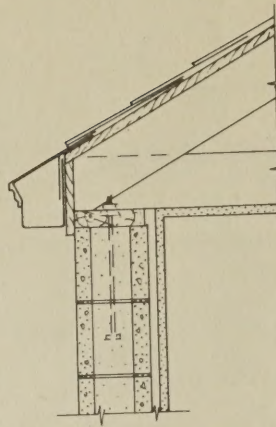


*Additional insulation may be had by filling air space with insulation material*

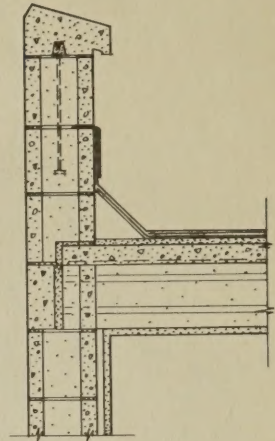
*Coursed ashlar on one face - random ashlar on other face*

HOLLOW DOUBLE WALL

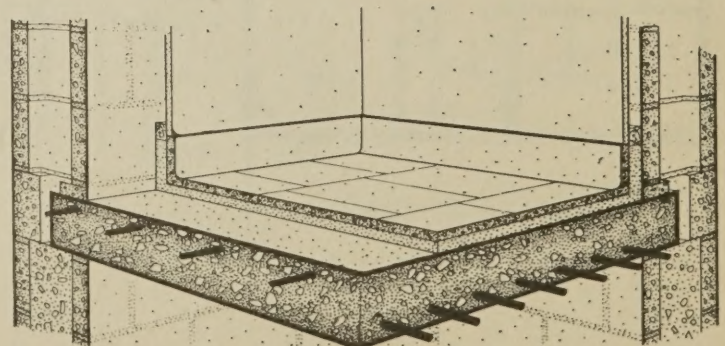
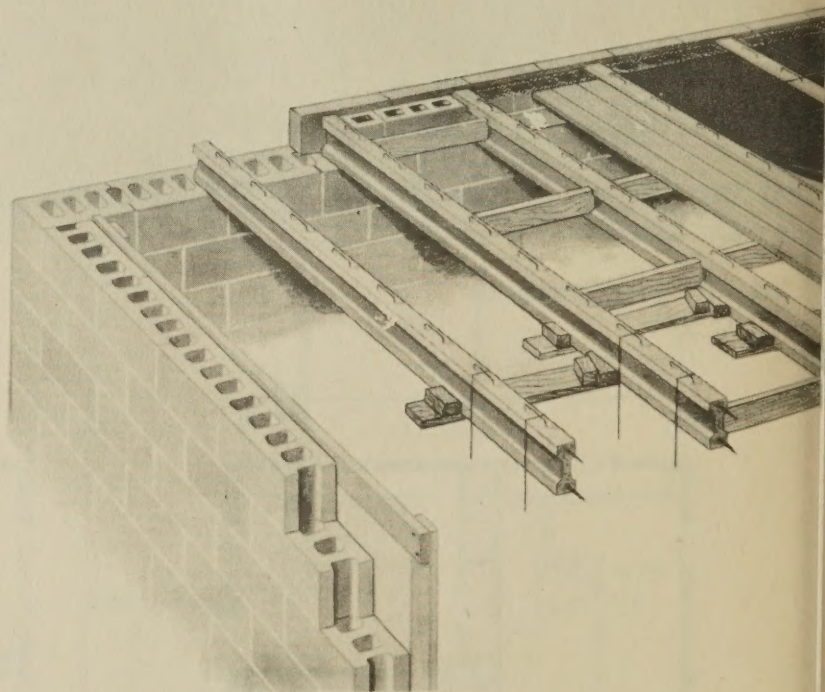
## TYPICAL DETAILS OF



PITCHED ROOF



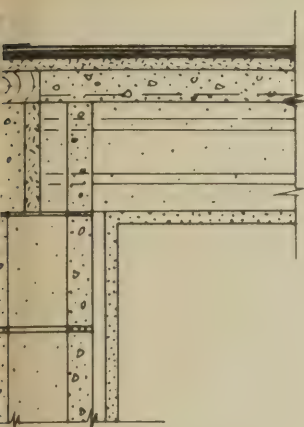
FLAT ROOF WITH PARAPET



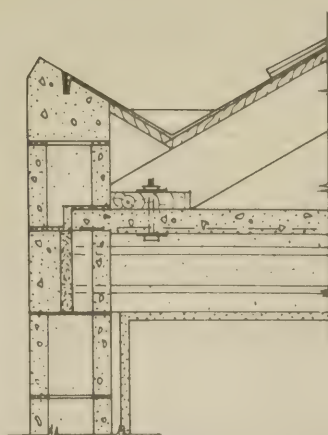
Solid Slab Floor



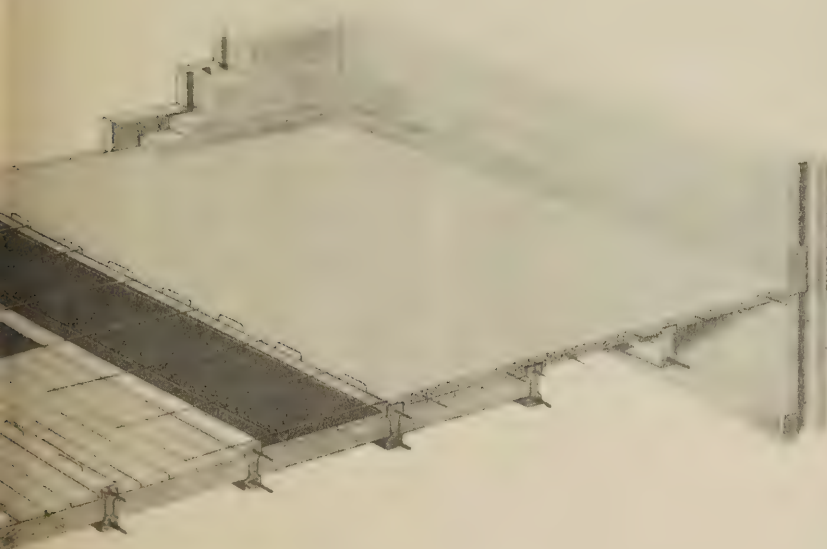
# Reinforced Concrete CONSTRUCTION



FLAT ROOF

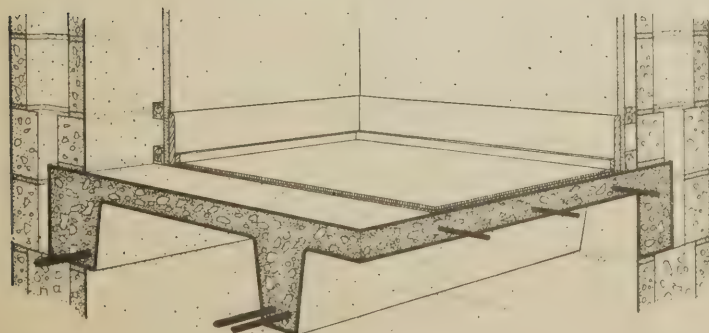


PITCHED ROOF WITH PARAPET



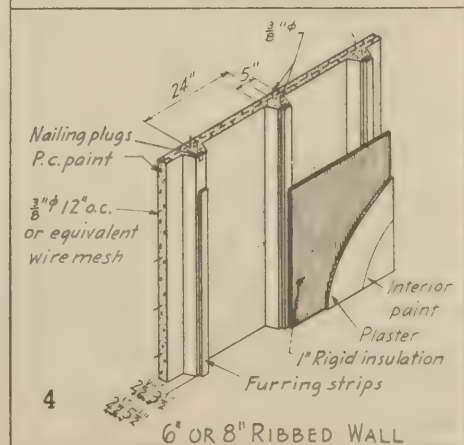
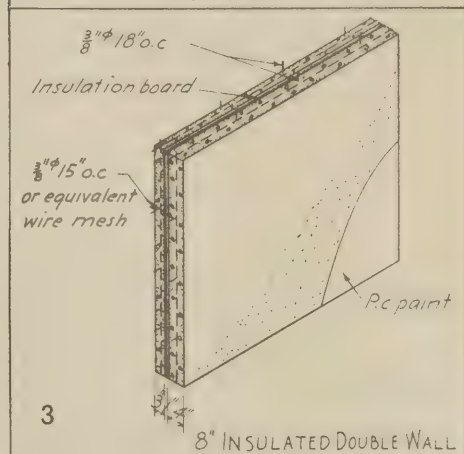
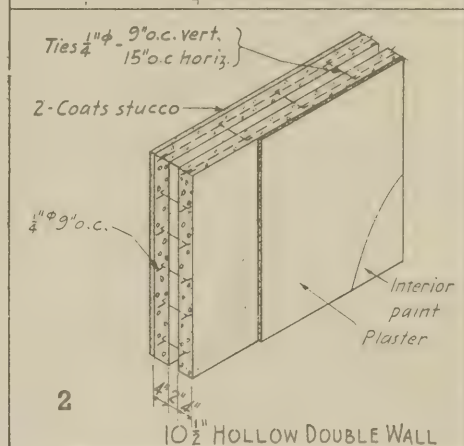
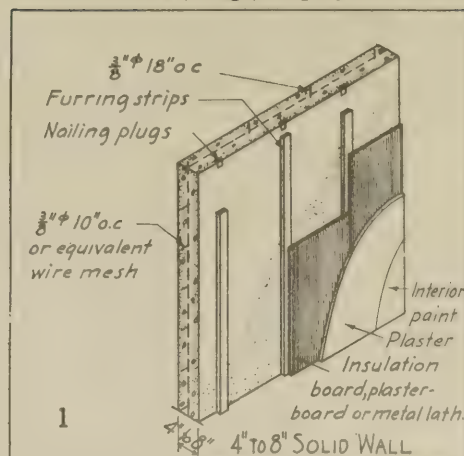
Note: Any type of floor covering may be laid over a concrete floor.

## Precast Concrete Joist Floor



Ribbed Joist Floor

## Reinforced Concrete Wall Sections

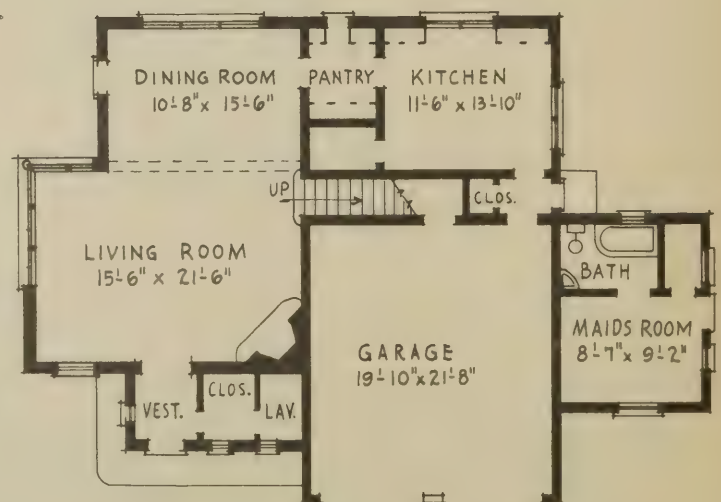
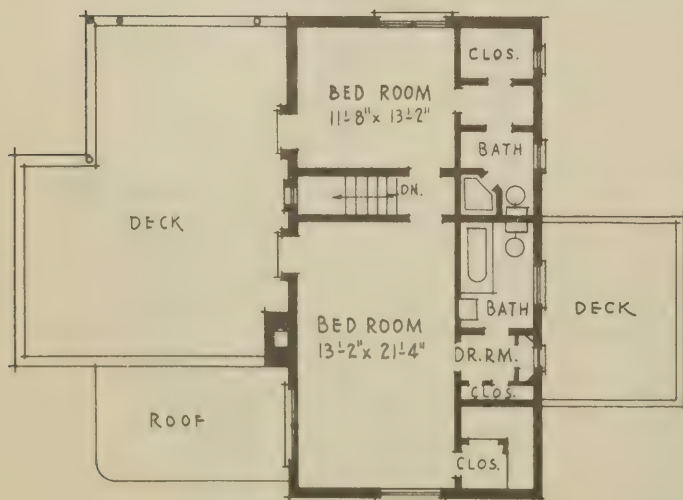






Dallas, Texas

Thompson & Perry, Architects

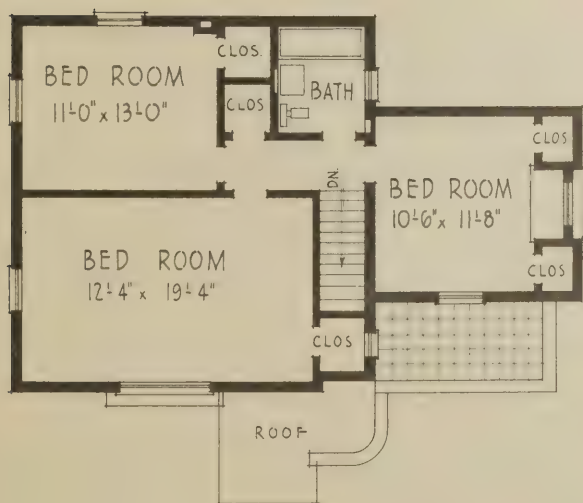




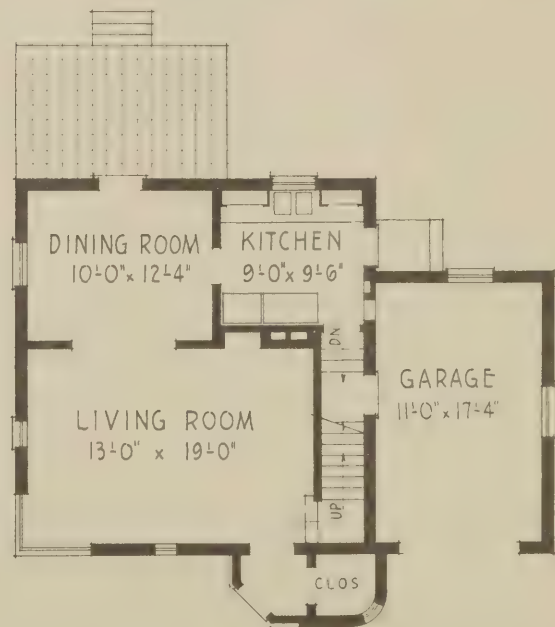


*La Grange, Illinois*

*William F. Kramer, Architect*



SECOND FLOOR PLAN



FIRST FLOOR PLAN



# WHY IT COSTS LESS TO LIVE IN A FIRESAFE CONCRETE HOUSE

THE houses illustrated in the preceding pages show the types of dwellings that are being built today and definitely indicate that the trend is toward firesafe, durable construction.

## Firesafe Homes Have Many Advantages

When you build firesafe, other desirable qualities go hand in hand with it. The more important of these are increased structural stability, slower depreciation, reduced maintenance costs, reduced fire insurance premiums and proof against termite damage.

Firesafe construction is becoming more generally used in home building, despite the fact that higher first cost has previously discouraged its wider use. Experienced home owners, however, who look ahead are demanding firesafe construction because they know that low first cost may mean higher ultimate cost due to the need for expensive repairs and maintenance.

## Additional Costs of Non-Firesafe Construction

The following typical example shows that a non-firesafe home with exterior walls, floors and partitions built of combustible materials, may cost more to own than its "twin" with walls and floors of firesafe construction. Consider the cost to the owner of this typical \$6,500 two-story, six-room residence, 22 by 35 ft., shown on the opposite page.

With non-firesafe construction the home owner will have these additional monthly costs:

1. Proper maintenance of the exterior surface of the non-firesafe building requires painting. Based on repainting the exterior every four years, the difference in cost for exterior maintenance will be \$30.00 or more per year for the non-firesafe house. This is equal to \$2.50 per month.

2. The difference in depreciation and obsolescence between non-firesafe and firesafe construction has been definitely established. On the basis of studies made by the United States Bureau of Internal Revenue, it is revealed that the depreciation and obsolescence of the non-firesafe home is 50 per cent more per year than for a firesafe home. In other words it is estimated that fire-

safe homes depreciate at the rate of 2% per year as against 3% for non-firesafe construction—a difference of 1% of the original value of the house per year in favor of firesafe construction. To be conservative, we will take only three-quarters of this allowance. Therefore, on a \$6,500 home this will amount to \$43.30 annually, equivalent to \$3.60 per month.

3. There is a saving in fire insurance premiums when you build firesafe. The difference in premiums for a home having firesafe exterior walls, partitions and sub-floors, and a non-firesafe home built of combustible materials throughout, is appreciable. The fire insurance rate on the residence shown on page 13 is 6½ cents per hundred. This compares with a 20-cent rate placed on the non-firesafe home next door. The fire insurance premium for the \$7,000 coverage (\$5,400 on the house, \$1,600 on the furniture) costs \$11.38 for three years. Applying a 20-cent rate to this amount of coverage, the premium would be \$35.00—or a saving of \$23.62 in favor of the concrete house. This is equivalent to \$7.80 per annum, or 65 cents per month.

The following table summarizes the difference in monthly costs between firesafe and non-firesafe construction as previously defined. It includes exterior maintenance, depreciation and obsolescence, and difference in fire insurance premiums.

## Additional Monthly Costs For Non-Firesafe Homes

(Combustible walls, floors and partitions)	
1. Exterior Maintenance (\$30 per year)	\$2.50
2. Depreciation and Obsolescence (\$43 per year)	3.60
3. Fire Insurance Premium (\$7.80 per year)	.65
Total Additional Cost	\$6.75

*This \$6.75 extra monthly cost would finance an additional investment of \$925.00 for firesafe construction with no added cost to the home owner, based on a 20-year FHA insured loan.*

## What Will Firesafe Construction Cost?

Will the firesafe home, with non-combustible walls and floors, cost \$925.00 more to build? Making no changes in plan or in the interior finish, the following  
(Continued on page 19)

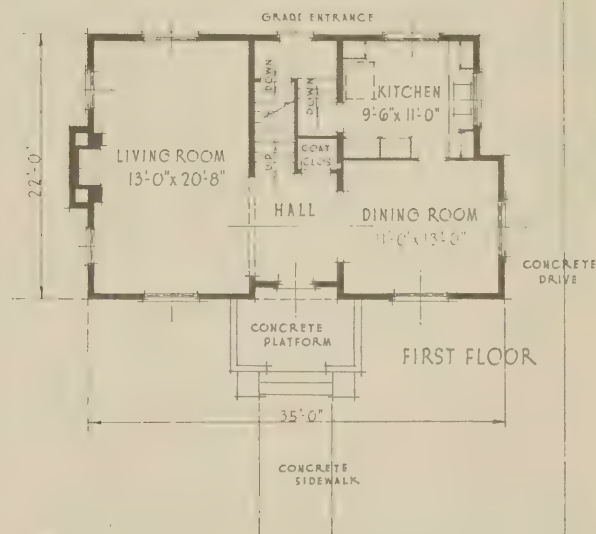




ELEVATION



SECOND FLOOR



FIRST FLOOR

## SIX ROOM NEW FUNCTIONAL CONCRETE HOME... LIVING ROOM, DINING ROOM, KITCHEN, THREE BED ROOMS AND BATH

Maximum economy in home building can be obtained through the use of durable, firesafe materials and standardization in construction. This economy is found to its fullest extent in the New Functional Concrete Home, which, because of its interchangeable room-unit construction, offers a variety of designs without the monotony and repetition usually associated with standardization.

By uniting five standard room-units in various combinations to meet individual family needs, an almost unlimited number of homes can be built—each different in appearance and floor plan. Home owners can thus receive the advantage of standardization without loss of individuality in the appearance or use of their houses.

The New Functional Home has concrete walls and partitions for durability and safety. The interior wall surfaces may be treated in any manner in keeping with the owner's taste. It has concrete floors—a large factor in firesafety—which may be finished in any of a number of floor finishes.

LIVING ROOM UNIT  
BED ROOM AND  
CLOSETS OVER,  
303 SQ. FT.

DINING ROOM UNIT  
BED ROOM AND  
CLOSET OVER,  
162 SQ. FT.

KITCHEN UNIT  
BED ROOM AND  
CLOSET OVER,  
120 SQ. FT.

HALL UNIT  
STAIR HALL  
AND BATH  
OVER,  
165 SQ. FT.

UNITS REQUIRED FOR FIRST  
FLOOR - 750 SQ. FT. IN ALL

*Here are the five standard room-units that make up the New Functional Home. Each of these room areas, excepting the garage, serves two functions—one on the first and the other on the second floor. They may be combined in almost any arrangement you wish.*

GARAGE UNIT  
ONE STORY  
240 SQ. FT.

Three New Functional Homes—all with same number and size of rooms, but each completely individual in appearance and arrangement



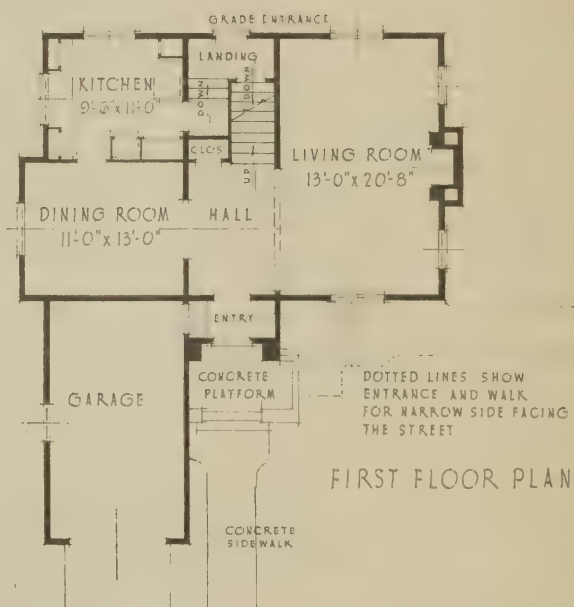




ELEVATION  
SAME AS HOUSE TO THE RIGHT  
WITH PITCH ROOF



ELEVATION  
BROAD SIDE TO THE STREET WITH  
GARAGE TO THE FRONT



Here are four different houses all with identical floor plan. At top: garage and entrance in front, broad side facing the street, indicates a wide, rather shallow lot. Difference is in roofs.

Below: same plan turned one-quarter around. Entrance comes at the side, with doorway and steps changed.



ELEVATION  
SAME AS HOUSE TO THE RIGHT  
WITH PITCH ROOF

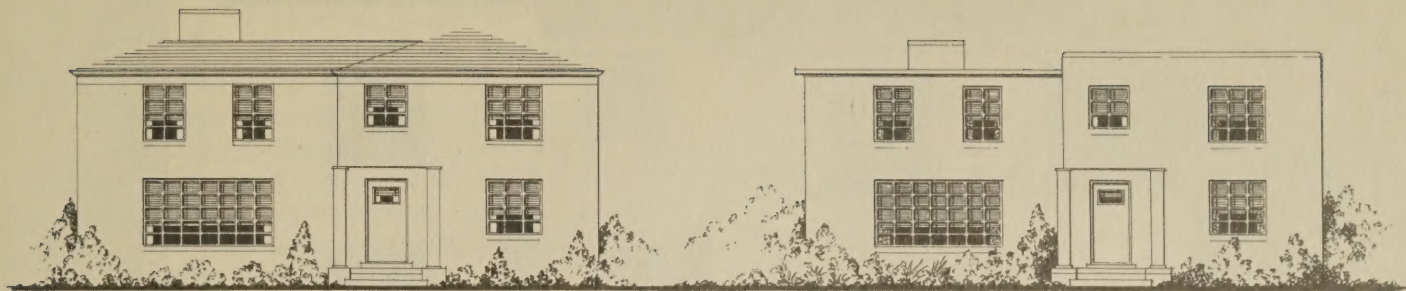


ELEVATION  
NARROW SIDE TO THE STREET  
WITH GARAGE AT THE SIDE

A row of New Functional Homes side by side along a street. Each is attractive and different; each fits certain limitations in size or shape of lot. But all are made of the same five standard room-units, arranged individually.

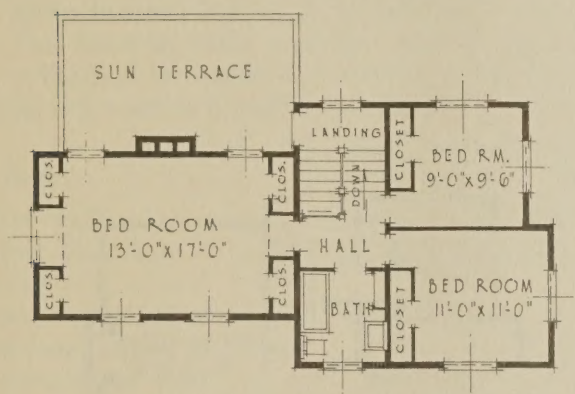




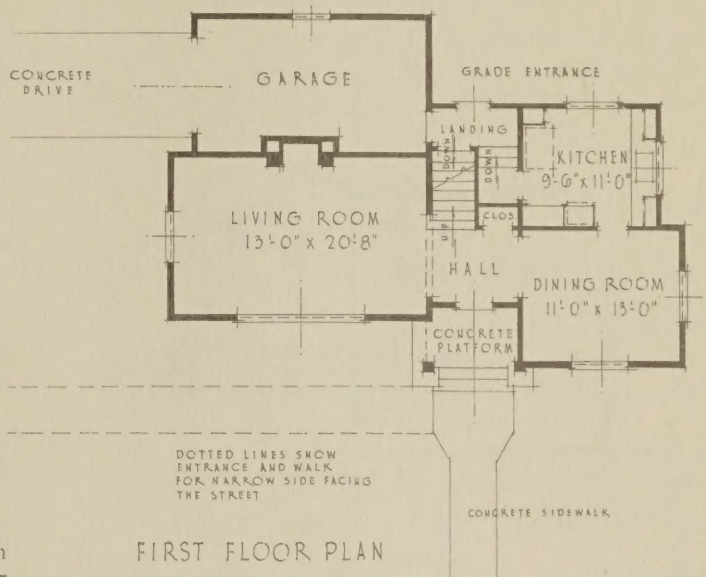


ELEVATION  
SAME AS HOUSE TO THE RIGHT  
WITH PITCH ROOF

ELEVATION  
BROAD SIDE TO THE STREET WITH  
GARAGE TO THE REAR



SECOND FLOOR PLAN



FIRST FLOOR PLAN

On this page are more houses built on the same floor plan but with different exterior appearance. At top: another arrangement for the wide lot, garage at rear. Roofs give modern or conventional appearance as desired. Doors, windows, wall areas and cost are practically the same.

Below: house turned with narrow side to street, suitable for the narrow lot.



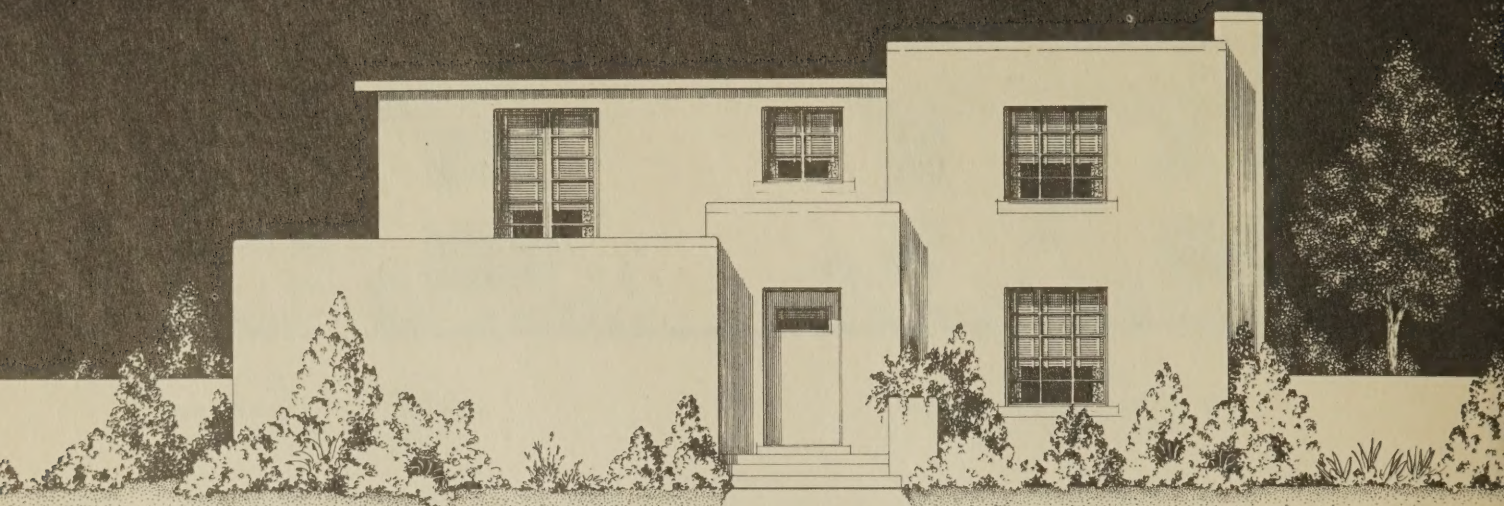
ELEVATION  
SAME AS HOUSE TO THE RIGHT  
WITH PITCH ROOF

ELEVATION  
NARROW SIDE TO THE STREET WITH  
GARAGE TO THE FRONT

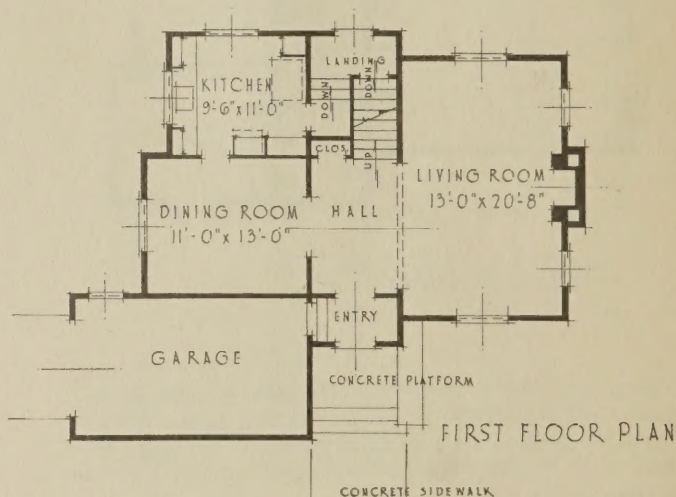
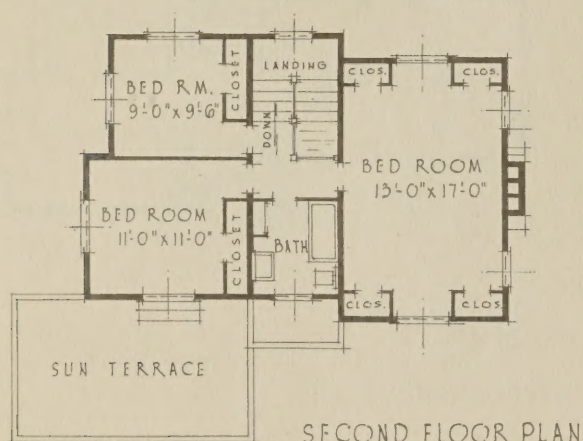
Completing the row of New Functional Homes. No two of them are even slightly alike in appearance, and their interior arrangements are as different; but they comprise the same five room-units and offer the economy of standardization.







ELEVATION



## THE ADVANTAGES OF THE NEW FUNCTIONAL CONCRETE HOME

The individual home owner wants a house that will fit his lot, that will suit his needs, and is good looking in an individual way. He wants all this at modest cost; he wants low maintenance and complete safety. The standardization of the New Functional Home gives that first economy; the variety of arrangement offers beauty and convenience; and the concrete construction provides for low maintenance and long life free from hazards of fire, storm and earthquakes.

Home development projects, where, row upon row, all houses are exactly alike in plan and exterior, offer a monotony of appearance that spoils the beauty of each home and lowers its desirability. They were built alike for the sake of economy. But the same

economy may be realized by building New Functional Concrete Homes, as many as are needed, without repetition. Each house will have a different exterior; most houses a different interior plan. Since all of them are built by using the standardized room-units, they will offer definite economies in construction.

Earthquakes and tornadoes have little effect on the rigid concrete house. Its impenetrable walls keep out rain, burning sun and cold. The woes of cracked plaster, gaping or sticking doors, sagging and squeaking floors and stairways are eliminated in the house that has concrete walls and floors. The durability of construction will make it cost less to own and keep in first class condition.





items of cost will remain practically the same whether or not you build firesafe:

Millwork, wiring, hardware, walks and driveways, glazing, grading, finish flooring, excavation, chimney, foundations, sheet metal, basement floors, plumbing, painting millwork, heating and interior decoration.

Thus, in comparing first cost between the two types, there are only these items to consider:

1. Exterior walls
2. Interior partitions
3. Sub-floors

The house under discussion is 22 by 35 ft. and contains approximately 710 sq. ft. of floor area on each floor. The following table gives the area of the walls and sub-floors to be refigured in arriving at the cost of changing this home to firesafe construction:

Items	Area Sq. Ft.	Additional Sq. Ft.*	Cost Total
Exterior walls.	1,750	11c	\$192.50
Sub-floor, first floor.	710	6c	42.60
First story			
Load bearing partitions	220	14c	30.80
Non-load bearing partitions	170	6c	10.20
Sub-floor, second floor	710	15c	106.50
Second story			
Load bearing partitions	300	12c	36.00
Non-load bearing partitions	370	6c	22.20
Construction Financing at 2½%			11.02
Total Additional Cost			\$451.82

\*Average additional cost per sq. ft.

Using firesafe construction on this \$6,500 home adds only \$452 to the first cost—less than half the additional investment financed by savings due to firesafe construction. The cost of financing an additional \$452 loan is \$3.30 per month. Subtracting this amount from \$6.75—the amount saved monthly by building firesafe—leaves \$3.45 per month *actual saving to the home owner*. Using this \$3.45 monthly saving to amortize the loan, the firesafe house will be paid for in 17 years and nine months instead of 20 years. Based on costs assumed in this example, this is a saving of 27 monthly payments of \$54.00 each, amounting to a total reduction of \$1,458.00 in the cost to the owner of the firesafe house. In the same way, you can determine the actual savings due to firesafe construction in your community by obtaining local figures for firesafe construction in comparison with non-firesafe construction. Naturally local figures may vary somewhat from the average prices given in the above example.

## No Hidden Mortgage!

In the construction of the non-firesafe residence, few people realize they are in fact assuming a hidden mortgage of \$1,000 or more, bearing 6 per cent interest. The interest on this amount of money is necessary to offset additional maintenance and depreciation costs over that required for firesafe construction. These extra costs continue throughout the life of the building. If this \$60.00 or more per year is not spent wisely and timely, depreciation and deterioration of the non-firesafe residence is rapid.

## Termites—a Menace

Another consideration in establishing comparative annual cost figures between firesafe and non-firesafe construction, is termite protection. The U. S. Department of Agriculture in Leaflet No. 31, *Termites in Buildings*, states as follows:

"A few hundred additional (2 per cent of first cost) spent in the beginning in proper building construction may save you thousands of dollars in repairs and replacements later. It is much simpler and cheaper to keep termites out of a building than to get rid of them and repair the damage after they are once in. The necessary repairs may be too costly for the small householder."

The repair of termite damage in a 10-year-old Manchester, Conn., residence cost over \$3,000. Unfortunately, this is not an isolated case and the infested areas are increasing rapidly.

Concrete sub-floors and walls or masonry walls built with mortar containing a high percentage of portland cement, are the most effective means of building out this destructive pest.

## Advantages of Firesafe Construction

Remember that in addition to actually saving the home owner money, firesafe construction also provides the following important advantages:

- Structural stability
- Security of investment
- Higher resale value
- Protection from termites

As soon as the residence-building public realizes the actual savings plus additional security obtained with firesafe construction, there will be an increased demand for firesafe homes.



## **DON'T ACCEPT ANYTHING LESS *than* a FIRESAFE CONCRETE HOME!**

**D**UE to rapid progress in home building with concrete, it may be that some building contractors in your community who have specialized on less durable types of construction are not yet familiar with the latest developments in building attractive firesafe homes of concrete. Do not let that fact shake your determination to have the best that your building dollar can buy in today's market—a concrete home.

Even the small home can now have the priceless gift of firesafety and the welcome freedom from repairs and upkeep that concrete provides. With concrete you can build a home that you will be proud of for a lifetime or if you should ever decide to sell, will have high resale value.

In or near your community there is a concrete contractor or home builder who can give you exactly what you want. If you do not know such builders or contractors, ask a reliable manufacturer of concrete masonry building units or your cement dealer to recommend one. This concrete products manufacturer can also give you names of architects experienced in designing beautiful, firesafe concrete homes.

**P O R T L A N D   C E M E N T   A S S O C I A T I O N**

*A National Organization to Improve and Extend the Uses of Concrete*

**33 West Grand Avenue**

**Chicago, Illinois**

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